

## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <a href="http://about.jstor.org/participate-jstor/individuals/early-journal-content">http://about.jstor.org/participate-jstor/individuals/early-journal-content</a>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

### SCIENTIFIC BOOKS

#### FUNDAMENTALS OF PLANT BREEDING

By JOHN M. COULTER, Head of the Department of Botany, University of Chicago.

A popular work written to show how new and desirable plants are developed. It gives the latest information on plant breeding, making it invaluable to farmers, florists, gardeners, teachers and everyone concerned in raising plants of any kind

Illustrated, \$1.50 net.

D. Appleton & Company, Publishers, New York

#### MODERN PROBLEMS OF BIOLOGY

Lectures delivered at the University of Jena. By CHABLES S. MINOT, S.D., LL.D., Professor of Comparative Anatomy, Harvard University Medical School. Author of "A Laboratory Text Book of Embryology." 53 illustrations. 8vo. Cloth, \$1.25 postpaid.

P. BLAKISTON'S SON & CO. Philadelphia

#### THE MEANING OF EVOLUTION

By SAMUEL C. SCHMUCKER, Professor of the Biological Sciences in the West Chester State Normal School.

An attempt to give to people whose training is other than cientific some conception of the great story of creation. Pp. viii +298.

The Macmillan Company, New York

#### A NEW ERA IN CHEMISTRY

By HARRY C. JONES, Professor of Physical Chemistry in the Johns Hopkins University.

Some of the more important developments in general chemistry during the last quarter of a century. Pp. xii +326. \$2.00

New York, D. Van Nostrand Company

#### ILLUSTRATED FLORA OF THE NORTHERN UNITED STATES AND CANADA AND THE BRITISH POSSESSIONS

By NATHANIEL LORD BRITTON, Director-in-Chief of the New York Botanical Garden, and the Hon. Addison Brown. The aim of this work is to illustrate and describe every species, from the Ferns upward, recognized as distinct by botanists and growing wild within the area adopted. In three volumes, illustrated. Pp. xxix+680; iv+735; iv+637. Charles Scribner's Sons, New York

#### A HANDBOOK OF MEDICAL ENTOMOLOGY

By Wm. A. RILEY, Ph.D., and O. A. JOHANNSEN, Ph.D., Cornell University.

A new and up-to-date account of poisonous and parasitic in-sects and their allies, especially those that transmit and des-seminate disease. Illustrated. Keys for identification, Cloth, 350 pages. Price \$2.20 postpaid.

Send for circular

The Comstock Publishing Company, Ithaca, New York

#### CHARACTER AND TEMPERAMENT

The Psychological Sources of Human Quality

By Joseph Jastrow, Professor of Psychology, University of Wisconsin.

(Conduct of Mind Series)

D. APPLETON & COMPANY. 1915

#### THE UNCAUSED BEING AND THE CRI-TERION OF TRUTH

By E. Z. DERR, M.D.

A profoundly philosophical work.—San Francisco Argonaut.

Of a highly philosophical character. The author reveals the weak points in Pantheism and Polytheism as these systems find expression in modern writings.—Springfield Republican. \$1.00 net.

Sherman, French & Company, Publishers Boston

#### THE NATURE AND ORIGIN OF FIORDS

By J. W. GREGORY, F.R.S., D.Sc.

This book is divided into three parts; a preliminary statement of the flord problem and its interest. A descrip-tion of the flord systems of the earth, and a discussion of the evidence including the question of the efficiency of glacial erosion.

JOHN MURRAY, London

#### THE LIVING PLANT

By WILLIAM F. GANONG, Ph.D., Professor of Botany in Smith College.

This book seeks to present to all who have interest to learn an accurate and vivid conception of the principal things in plant life. Pp. xii +478. \$3.50 net. By mail \$3.80.

Henry Holt & Company, New York

#### ASTRONOMY

By George F. Chambers, F.R.A.S., of the Inner Temple, Barrister-at-law.

Barrister-at-law.

A popular outline of leading facts, which may be easily grasped by any fairly educated person who is disposed to give a limited amount of time and thought to the matter and who happens to possess a small telescope and a good opera glass.

Pp. xxiv+335. \$1.50 net.

D. VAN NOSTRAND COMPANY,

New York City

#### HEREDITY AND EUGENICS

By WILLIAM ERNEST CASTLE, JOHN MERLE COULTER, CHARLES
BENEDICT DAVENPORT, EDWARD MURRAY EAST, WILLIAM
LAWRENCE TOWER.
A course of lectures summarizing recent advances in
knowledge in Variation, Heredity and Evolution and its Relation to Plant, Animal and Human Improvement and Welfare.
Pp. vii +315.
The University of Chicago Pease

The University of Chicago Press Chicago, Ill.

#### STILES' NUTRITIONAL PHYSIOLOGY

By Percy Goldthwart Stiles, Assistant Professor of Physiology at Simmons College, Boston.

This new book discusses in a concise way the processes of digestion and metabolism. The key word of the book throughout is "energy"—its source and its conservation. 12mo 295 pages illustrated. Cloth, \$1.25 net.

W. B. SAUNDERS COMPANY

Philadelphia

London

Method of sizing the pipes for low pressure steam heating based upon the loss of pressure per lineal foot. Four large tables and a few small ones.  $4\frac{1}{2} \times 6\frac{1}{4}$ ; 47 pp.; \$2.00 postpaid.

Losses of pressure per lineal foot for different coefficients of friction. 1 table, 50 cents postpaid.

I. CHAIMOVITSCH, M.E., LL.B.

P. O. Box 298.

Chicago

## PROBLEMS OF SCIENCE

### By FEDERIGO ENRIQUES

Translated by Katharine Royce with an introduction by Josiah Royce

Pp. 392. Cloth. Price, \$2.50

A scientific methodology with numerous references to contemporary interests and controversies

#### PRESS NOTICES

"Prof. Royce thinks that the book will be read with particular interest on account of the opposition that it offers to current 'anti-intellectual' types of philosophizing, though the book was first published in Italian before the controversies about 'pragmatism,' intuitionism,' etc., arose. At the same time, Enriques, whose disposition is that of the mathematician and logician, has, through independent thinking, come to support the same theses as the pragmatists regarding the 'instrumental' or the 'functional' character of thought."—Springfield Republican.

"The book is written in a very attractive style, and presents some of the most difficult problems in a way that the unprofessional reader can understand. It is worthy of being translated into English, and worthy of this excellent translation."—Boston Transcript.

"Enriques, as Prof. Royce shows, views the thinking process as an 'ad ustment' to 'situations,' but he also lays great stress 'upon the tendency of science to seek unity upon the synthetic aspect of scientific "representations." Enriques treats all these questions with originality as well as great depth of thought and the appearance of his book in English makes an important addition to the body of metaphysical literature in our language."—Chicago News.

"The work before us is perhaps the most considerable since Mill."—THE NATION.

Order[through your dealer ON EXAMINATION

**CHICAGO** 

THE OPEN COURT PUBLISHING CO.

LONDON

## In 1914

And every year since

## Speed and Accuracy

Contests began the

# UNDERWOOD

Has held first place

"The Machine You Will Eventually Buy"
Underwood Building New York

Send for descriptive circulars and sample

pages

## PRINCIPLES

## STRATIGRAPHY

BY

### AMADEUS W. GRABAU, S.M., S.D.

PROFESSOR OF PALAEONTOLOGY IN COLUMBIA UNIVERSITY

Large Octavo, 1150 pages, with 264 illustrations in the text. Cloth bound, price, \$7.50.

Send for descriptive circular

A. G. SEILER & CO.

PUBLISHERS

1224 Amsterdam Avenue

NEW YORK, N.Y.

## Send for The Open Court List οf

## Scientific Books

The Algebra of Logic. By Louis Couturat. Authorized translation by Lydia G. Robinson, with preface by Philip E. B. Jourdain. Pp. 41, 8vo; cloth. An introduction to the study of mathematical logic. Price, \$1.50.

One of the simplest and most concise treat. ments of the subject of symbolic logic. The preface is of an historical character and gives a very thorough account of the development of the subject and the various phases of it, especially emphasized by each of its different representatives.

The Open Court Publishing Co. CHICAGO

### SCIENCE

### A WEEKLY JOURNAL DEVOTED TO THE ADVANCEMENT OF SCIENCE

FRIDAY, SEPTEMBER 10, 1915

Conservation and the Veterinarian: Dr. Pierre A. Fish.

Quantity and Quality: Professor G. A. Miller. Frederic Ward Putnam: Professor Franz Boas.

Paul Ehrlich

The New York Botanical Garden.

Scientific Notes and News.

University and Educational News. Discussion and Correspondence:-

Mass as Quantity of Matter: Professor L. M. Hoskins. Is Sivapithecus Pilgrim an Ancestor of Man? Dr. William K. Gregory. Castle and Wright on Crossing-over in Rats: Dr. A. H. Sturtevant.

Scientific Books:-

A Monograph of the Existing Crinoids: Frank Springer.

The National Academy of Sciences: Professor Edwin Bidwell Wilson.

Special Articles:-

Intracellular Digestion and Assimilation in Amphibian Embryos: Dr. George E. Coghill. Trains of Beating Light Waves: Professor Carl Barus.

Society of American Bacteriologists: Dr. A. Parker Hitchens.

Annual Subscription \$5.00.

FRIDAY, SEPTEMBER 17, 1915

American Achievements and American Failures in Public Health Work: W. T. Sedgwick.

A Simple Method of Indicating Geographical Distribution. J. Adams.

The Committee of One Hundred of the American Association for the Advancement of Science.

The Naval Advisory Board of Inventions.

Scientific Notes and News.

University and Educational News.

Discussion and Correspondence:-

California and Stanford misrepresented: Dr. A. W. Meyer. Successful Long-distance Shipment of Citrus Pollen: Maude Kellerman. Valley-fill of Arid Intermont Plains: Charles Keyes.

Scientific Books:-

Haldane on Mechanism, Life and Personality: Professor L. J. Henderson Richardson on the Electron Theory of Matter: Professor R. A. Millikan.

Special Articles:
A System of Recording Types of Mating in Experimental Breeding Operations: Dr. Raymond Pearl. The Chemical Composition of Bornite: Professor Austin F. Rogers. Studies in the Measurement of the Electrical Conductivity of Solutions: W. A. Taylor.

The American Physical Society: Professor A. D. Cole. The American Genetic Association. Paul Popenoe.

Single Numbers 15 cents.

Published every Friday by

### THE SCIENCE PRESS

LANCASTER, PA.

GARRISON, NEW YORK.

Sub-Station 84: New York

# THE SCIENTIFIC MONTHLY AND THE POPULAR SCIENCE MONTHLY

THE POPULAR SCIENCE MONTHLY, since its establishment in 1872 by J. W. Youmans and the firm of D. Appleton and Company, has endeavored to perform two functions which are somewhat distinct. On the one hand, it has aimed to popularize science, and, on the other hand, to publish articles reviewing scientific progress and advocating scientific, educational and social reforms. The objects are both important, but as science grows in complexity it becomes increasingly difficult to unite them in the same journal.

In the earlier years of The Popular Science Monthly the doctrine of evolution excited controversy and wide public interest; it was possible to print articles by men such as Darwin, Spencer, Huxley and Tyndall, which were popular and at the same time authoritative contributions to scientific progress. Dr. Youmans had the fervent faith and missionary spirit which enabled him to conduct a journal to which the word "popular" was properly applied. At that time other magazines, such as The Atlantic and Scribner's, also published articles and had departments concerned with popular science.

The last third of the nineteenth century may properly be characterized as the era of science, so rapid was the progress of science and so important the part it assumed in our civilization. This progress not only requires specialization of work, but even makes it difficult for the worker in one field to understand the work accomplished in other fields, though the barrier is perhaps due to terminology rather than to ideas. For the general public the difficulties are greater, and there is danger lest it may lose touch with the advances of science. But in a democracy in which science must depend on the people for support and for recruits, it is essential that a sympathetic understanding be maintained. For this purpose two journals are needed rather than one, for it is necessary to address those having different interests.

During the fifteen years since 1900, the editor of The Popular Science Monthly aimed to conduct a journal maintaining high scientific standards and discussing authoritatively problems of scientific importance. The journal was popular, in the sense that it was not special or technical and could be understood by those having education and intelligence, but it was not popular in the sense that it appealed to all people and might number its subscribers by the hundreds of thousands. Manuscripts were received in large numbers which were clearly intended for a magazine of different type, and such a magazine is needed. A well-illustrated magazine devoted to the popularization of science should have a wide circulation and be conducted on different lines from a journal concerned with the less elementary aspects of scientific work, just as a high school and the graduate school of a university differ in their methods and in their appeal.

A group of men desiring a journal to which the name The Popular Science Monthly will exactly apply, this publication has been transferred to them, while, beginning in October, a journal on the present lines of The Popular Science Monthly will be conducted under the more fitting name of The Scientific Monthly. This differentiation of The Popular Science Monthly into two journals is in the natural course of evolution, each journal being able to adapt itself to its environment more advantageously than is possible for a single journal. Each can perform an important service for the diffusion and advancement of science.—From an editorial statement in The Popular Science Monthly for September, 1915.

### SCIENTIFIC BOOKS

#### SENESCENCE AND REJUVENESCENCE

By CHARLES MANNING CHILD, Associate Professor of Zoology in the University of Chicago

This book differs from most previous studies of senescence in that it attempts to show that in the organic world in general rejuvenescence is just as fundamental and important a process as senescence. xii + 482 pages, 8vo, cloth, \$4.00, postage extra (weight 3 lbs.).

The University of Chicago Press, Chicago, Illinois

#### MODERN PROBLEMS OF BIOLOGY

Lectures delivered at the University of Jens. By CHARLES S. MINOT, S.D., LL.D., Professor of Comparative Anatomy, Harvard University Medical School. Author of "A Laboratory Text Book of Embryology." 53 illustrations. 8vo. Cloth, \$1.25 postpaid.

P. BLAKISTON'S SON & CO. Philadelphia

#### THE MEANING OF EVOLUTION

By SAMUEL C. SCHMUCKER, Professor of the Biological Sciences in the West Chester State Normal School.

An attempt to give to people whose training is other than scientific some conception of the great story of creation. Pp. viii +298.

The Macmillan Company, New York

#### A NEW ERA IN CHEMISTRY

By HARRY C. JONES, Professor of Physical Chemistry in the Johns Hopkins University.

Some of the more important developments in general chemistry during the last quarter of a century. Pp. xii +326.

New York, D. Van Nostrand Company

#### AN ILLUSTRATED FLORA OF THE NORTHERN UNITED STATES AND CANADA AND THE BRITISH POSSESSIONS

By NATHANIEL LORD BRITTON, Director-in-Chief of the New York Botanical Garden, and the Hon. Addison Brown. The aim of this work is to illustrate and describe every species, from the Ferns upward, recognized as distinct by botanists and growing wild within the area adopted. In three volumes, illustrated. Pp. xxix+680; iy+735; iy+637. Charles Scribner's Sons, New York

#### A HANDBOOK OF MEDICAL ENTOMOLOGY

By Wm. A. RILEY, Ph.D., and O. A. Johannsen, Ph.D., Cornell University.

A new and up-to-date account of poisonous and parasitic in-sects and their allies, especially those that transmit and des-seminate disease. Illustrated. Keys for identification, seminate disease. Illustrated. K Cloth, 350 pages. Price \$2.20 postpaid.

Send for circular

The Comstock Publishing Company, Ithaca, New York

#### CHARACTER AND TEMPERAMENT

The Psychological Sources of Human Quality

By JOSEPH JASTROW, Professor of Psychology, University of Wisconsin.

(Conduct of Mind Series)

D. APPLETON & COMPANY. 1915

#### THE UNCAUSED BEING AND THE CRI-TERION OF TRUTH

By E. Z. DERR, M.D.

naut. profoundly philosophical work.—San Francisco Argo-

Of a highly philosophical character. The author reveals the weak points in Pantheism and Polytheism as these systems find expression in modern writings,—Springfield Republican. \$1.00 net.

Sherman, French & Company, Publishers
Boston

#### THE NATURE AND ORIGIN OF FIORDS

By J. W. GREGORY, F.R.S., D.Sc.

This book is divided into three parts; a preliminary statement of the fiord problem and its interest. A description of the fiord systems of the earth, and a discussion of the evidence including the question of the efficiency of glacial erosion.

JOHN MURRAY, London

#### THE LIVING PLANT

By WILLIAM F. GANONG, Ph.D., Professor of Botany in Smith College.

This book seeks to present to all who have interest to learn an accurate and vivid conception of the principal things in plant life. Pp. xii +478. \$3.50 net. By mail \$3.80.

Henry Holt & Company, New York

#### ASTRONOMY

By George F. Chambers, F.R.A.S., of the Inner Temple.

By George F. Chambers, F. L. Chan, Barrister-at-law.

A popular outline of leading facts, which may be easily grasped by any fairly educated person who is disposed to give a limited amount of time and thought to the matter and who happens to possess a small telescope and a good opera glass.

Pp. xxiv+335. \$1.50 net.

D. VAN NOSTRAND COMPANY,

New York City

#### HEREDITY AND EUGENICS

By William Ernest Castle, John Merle Coulter, Charles Benedict Davenport, Edward Murray East, William

LAWRENCE TOWER.

A course of lectures summarizing recent advances in knowledge in Variation, Heredity and Evolution and its Relation to Plant, Animal and Human Improvement and Welfare.

Pp. vii +315.

The University of Chicago Press.

The University of Chicago Press Chicago, Ill.

#### STILES' NUTRITIONAL PHYSIOLOGY

By Percy Goldthwait Stilles, Assistant Professor of Physiology at Simmons College, Boston.

This new book discusses in a concise way the processes of digestion and metabolism. The key word of the book throughout is "energy"—its source and its conservation. 12mo 295 pages illustrated. Cloth, \$1.25 net.

W. B. SAUNDERS COMPANY

Philadelphia

London

Method of sizing the pipes for low pressure steam heating based upon the loss of pressure per lineal foot. Four large tables and a few small ones. 4½ x 6½; 47 pp.; \$2.00 postpaid.

Losses of pressure per lineal foot for different coefficients of friction. 1 table, 50 cents postpaid.

I. CHAIMOVITSCH, M.E., LL.B.

P. O. Box 298. Chicago

## Socrates: Master of Life

# By WILLIAM ELLERY LEONARD

A popular yet first-hand study, by an American scholar, poet and thinker; comprising a critical examination of the Greek sources, a lively and picturesque review of the career of Socrates in its political and social environment, and a subtle and sympathetic analysis of his ideas and of his personality.

Cloth, \$1.00. Pp. 120

THE OPEN COURT PUBLISHING CO. chicago

## In 1914

And every year since

## Speed and Accuracy

Contests began the

# UNDERWOOD

Has held first place

"The Machine You Will Eventually Buy"

**Underwood Building** 

**New York** 

Send for descriptive circulars and sample

pages

## PRINCIPLES OF

## STRATIGRAPHY

BY

AMADEUS W. GRABAU, S.M., S.D.

PROFESSOR OF PALAEONTOLOGY IN COLUMBIA UNIVERSITY

Large Octave, 1150 pages, with 264 illustrations in the text. Cloth bound, price, \$7.50.

Send for descriptive circular

A. G. SEILER & CO. **PUBLISHERS** 

1224 Amsterdam Avenue

NEW YORK, N.Y.

## The Sarah Berliner Research Fellowship for Womena

A fellowship of the value of one thousand dollars is offered annually, available for study and research in physics, chemistry or biology. Applicants must already hold the degree of doctor of philosophy or be similarly equipped for the works of further Applications must be received research. by the first of January of each year. Further information may be obtained from the chairman of the committee, Mrs. CHRISTINE LADD FRANKLIN, 527 Cathedral Parkway, New York.

### SCIENCE

### A WEEKLY JOURNAL DEVOTED TO THE ADVANCEMENT OF SCIENCE

FRIDAY, DECEMBER 31, 1915

The Address of the President of the American Association for the Advancement of Science. The Fruits, Prospects and Lessons of Recent Biological Science: Dr. Charles W. Eliot.

The Bureau of Fisheries.

Appointments and Dismissals at the University of Pennsylvania.

The Pan-American Scientific Congress.

Scientific Notes and News.

University and Educational News.

Discussion and Correspondence:
A Galapagos Tortoise: Frank S. Daggett. Two Partial-albino Birds: Wallace Craig. Anopheles pseudopunctipennis: W. V. King.

Scientific Books:

Kraemer's Scientific and Applied Pharmacognosy: E. K. Hager's Practical Oil Geology: Professor Charles T. Kirk.

Special Articles:

Pecial Articles:
The Relative Numbers of Rhizopods and Flagellates in the Fauna of Soils: Professor Charles A. Kofoid. The Native Habitat of Spongospora subterranea: G. R. Lyman, J. T. Rogers. Color Effects of Positive and of Cathode Rays in Residual Air, Hydrogen, Helium, etc.: Professor Chas. T. Knipp.

The American Chemical Society: Dr. Charles L. Parsons.

Annual Subscription \$5.00.

FRIDAY, JANUARY 7, 1916

The American Association for the Advancement of Science Botany in Relation to Agriculture: Dr. G. P. Clinton.

The Mineral Production of the United States in 1915.

Medalists of the Royal Society.

Memorial to John Wesley Powell.

Scientific Notes and News.

University and Educational News.

Discussion and Correspondence:

The Origin of the "Niter Spots" in Certain Western Soils, Professor Robert Stewart and Professor William Peterson Mottled Limestones and their Bearing on the Origin of Dolomite: Francis M. Van Tuyl. Serpent Instinct in Man: T. G. Dabney. The Teaching of Elementary Dynamics: Wm. Kent.

Scientific Books:

Herms's Medical and Veterinary Entomology: Dr. L. O. Howard. Child's Senescence and Rejuvenescence: Professor Charles Zeleny. Bauer and Fleming on Land Magnetic Observations: Professor W. G. Cady.

Special Articles:

Some Suggestions on Methods for the Study of Nitrification: Professor W. P. Kelley, Experiments with Agents Calculated to Kill the Trombidium holosericeum: B. F. Kaupp. The Growth of Bone in Cretaceous Times: Dr. Roy L. Moodie.

The American Association for the Advancement of Science: The Columbus Meeting: Dr. L. O. Howard.

Single Numbers 15 cents.

Published every Friday by

### The science press

LANCASTER, PA.

GARRISON, NEW YORK.

Sub-Station 84: New York

# THE SCIENTIFIC MONTHLY AND THE POPULAR SCIENCE MONTHLY

THE POPULAR SCIENCE MONTHLY, since its establishment in 1872 by E. L. Youmans and the firm of D. Appleton and Company, has endeavored to perform two functions which are somewhat distinct. On the one hand, it has aimed to popularize science, and, on the other hand, to publish articles reviewing scientific progress and advocating scientific, educational and social reforms. The objects are both important, but as science grows in complexity it becomes increasingly difficult to unite them in the same journal.

In the earlier years of The Popular Science Monthly the doctrine of evolution excited controversy and wide public interest; it was possible to print articles by men such as Darwin, Spencer, Huxley and Tyndall, which were popular and at the same time authoritative contributions to scientific progress. Dr. Youmans had the fervent faith and missionary spirit which enabled him to conduct a journal to which the word "popular" was properly applied. At that time other magazines, such as The Atlantic and Scribner's, also published articles and had departments concerned with popular science.

The last third of the nineteenth century may properly be characterized as the era of science, so rapid was the progress of science and so important the part it assumed in our civilization. This progress not only requires specialization of work, but even makes it difficult for the worker in one field to understand the work accomplished in other fields, though the barrier is perhaps due to terminology rather than to ideas. For the general public the difficulties are greater, and there is danger lest it may lose touch with the advances of science. But in a democracy in which science must depend on the people for support and for recruits, it is essential that a sympathetic understanding be maintained. For this purpose two journals are needed rather than one, for it is necessary to address those having different interests.

During the fifteen years since 1900, the editor of The Popular Science Monthly aimed to conduct a journal maintaining high scientific standards and discussing authoritatively problems of scientific importance. The journal was popular, in the sense that it was not special or technical and could be understood by those having education and intelligence, but it was not popular in the sense that it appealed to all people and might number its subscribers by the hundreds of thousands. Manuscripts were received in large numbers which were clearly intended for a magazine of different type, and such a magazine is needed. A well-illustrated magazine devoted to the popularization of science should have a wide circulation and be conducted on different lines from a journal concerned with the less elementary aspects of scientific work, just as a high school and the graduate school of a university differ in their methods and in their appeal.

A group of men desiring a journal to which the name The Popular Science Monthly will exactly apply, this publication has been transferred to them, while, beginning in October, a journal on the present lines of The Popular Science Monthly will be conducted under the more fitting name of The Scientific Monthly. This differentiation of The Popular Science Monthly into two journals is in the natural course of evolution, each journal being able to adapt itself to its environment more advantageously than is possible for a single journal. Each can perform an important service for the diffusion and advancement of science.—From an editorial statement in The Popular Science Monthly for September, 1915.

## The Scientific Monthly

Application made for entry at the Post Office in Lancaster, Pa., as second-class matter.

THE SCIENTIFIC MONTHLY is conducted on the editorial lines followed by THE POPLAR SCIENCE MONTHLY since 1900. It publishes as the THE POPULAR SCIENCE MONTHLY published, articles appealing especially to educated readers as opposed to purely poplar matter intended for the public generally, and for such a journal THE SCIENTIFIC MONTHLY appears to be the more fitting name. The editorial management, publication department and typographical form are the same as have characterized THE POPULAR SCIENCE MONTHLY during the past fifteen years, and have made it an important agency for the advancement and diffusion of science.

#### CONTENTS OF THE POPULAR SCIENCE MONTHLY

#### THE AUGUST NUMBER

The Constitution of Matter and the Evolution of the Elements. Professor Sir Ernest Rutherford.

War Selection in Europe. Chancellor David Starr Jordan.

The Psychology of War. Professor G. T. W. Patrick. So me Pioneers in Mosquito Sanitation and Other Mosquito Work. II. Dr. L. O. Howard.

Some Economic Factors Influencing the Forestry Situation. A. E. Hawes.

The Waste of Life. Elaine Goodale Eastman.

War and the Progress of Society. Professor I. W. Howerth.

The Functions of Primitive Ritualistic Ceremonies.

Dr. Clark Wissler.

The Progress of Science:

The Pacific Coast Meeting of the American Association for the Advancement of Science: National Contributions to Science; The New Science Museum in London; Scientific Items.

#### THE SEPTEMBER NUMBER

The Evolution of the Stars and the Formation of the Earth. Dr. William Wallace Campbell.

Ant-hill Fossils. Professor Richard Swan Lull.

Four Points in the Indictment of the Smoke Nuisance. John O'Connor, Jr.

A Civic Investment. President P. R. Kolbe.

Science and Democracy. Professor M. E. Haggarty.

Biological Effects of Race Movements. Chancellor David Starr Jordan.

Natural Science in the Middle Ages. Professor Lynn Thorndike.

A History of Fiji. Dr. Alfred Goldsborough Mayer.

The Progress of Science:

The Scientific Monthly and The Popular Science Monthly; Scientific Journals and the Public; Science and National Welfare; Scientific Items.

The MONTHLY will be sent to new subscribers for six months for One Dollar.

#### SUBSCRIPTION ORDER

To THE SCIENCE PRESS.

Publishers of THE SCIENTIFIC MONTHLY.

Sub-Station 84. New York City.

Please find enclosed check or money order for three dollars, subscription to THE SCIENTIFIC MONTHLY for one year, beginning September, 1915.

Name
${\it Address}$

Single Number 30 Cents

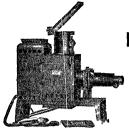
Yearly Subscription, \$3.00

### THE SCIENCE PRESS

Lancaster, Pa.

Sub-Station 84; New York

Garrison, N. Y.



A Mazda Lamp
Equaling the 35Ampere Arc for
Projection of
Opaque Objects

New Combined Balopticon

The newly developed, 1000-watt gas-filled Mazda Lamp mounted with an operal corrected reflecting mirror in our new Combined Balopticon permits opaque objects to be projected with a brilliancy exceeding that of the 35-ampere, alternating current, are lamp. Yet it consumes only 9 amperes and requires no rheostat.

The Balopticon projects opaque objects (projected areas, 6 x 6 inches) and lantern slides, with instant interchange between the two forms

The Mazda Lamp is absolutely automatic, hence, simple in operation, and very economical.

### Price, \$120.00

Special Terms to Educational Institutions
Write for Circular

BAUSCH & LOMB OPTICAL CO., 550 St. Paul St., ROCHESTER, N. Y.

NEW YORK WASHINGTON CHICAGO SAN FRANCISCO

Leading manufacturers in America of Photographic Lenses, Microscopes, Ophthalmic Lenses, Binoculars, and other high grade optical products

## CANDIES OF RARE QUALIT



Sold by our Sales Agents Everywhere in Three Sizes \$100-50¢-25¢

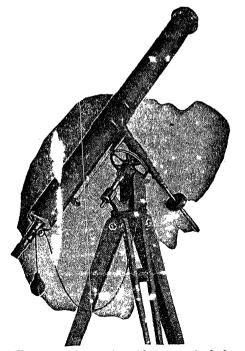


Illustration shows 5-in. with pneumatic clock.

Refracting and Reflecting

Astronomical Telescopes

Standard and Portable

Visual and Photographic OBJECTIVES

Computed by our associate

Dr. F. R. MOULTON

(Chicago University)

### **OBSERVATORIES**

Specula, Planes, Eyepieces, etc.

Photographs and Circulars on request

LOHMANN BROS.

GREENVILLE, OHIO :: :: U. S. A.